

Rearticulating the myth of human–wildlife conflict

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Abstract

Human–wildlife conflict has emerged as the central vocabulary for cases requiring balance between resource demands of humans and wildlife. This phrase is problematic because, given traditional definitions of conflict, it positions wildlife as conscious human antagonists. We used content analysis of wildlife conservation publications and professional meeting presentations to explore the use of the phrase, human–wildlife conflict, and compared competing models explaining its usage. Of the 422 publications and presentations using human–wildlife conflict, only 1 reflected a traditional definition of conflict, >95% referred to reports of animal damage to entities human care about, and <4% referred to human–human conflict. Usage of human–wildlife conflict was related to species type (herbivores with human food, carnivores with human safety, meso-mammals with property), development level of the nation where the study occurred (less developed nations with human food and more developed nations with human safety and property damage), and whether the study occurred on private lands or protected areas (protected areas with human–human conflict and other areas with property damage). We argue that the phrase, human–wildlife conflict, is detrimental to coexistence between humans and wildlife, and suggest comic reframing to facilitate a more productive interpretation of human–wildlife relationships.

Introduction

Understanding the changing social contexts for conflict between conservation and human welfare is central to biodiversity conservation (Czech *et al.* 1998; Chan *et al.* 2007; Peterson *et al.* 2008). Conflicts associated with biodiversity conservation reflect material as well as socially constructed realities (Guyer & Richards 1996; Schlosser 2006). Considerable research documents the material conditions where promoting human welfare while simultaneously conserving biodiversity appear incompatible (Kerr & Currie 1995; Forester & Machlis 1996; Czech *et al.* 2000), but little research addresses how social constructions of those material conditions shape biodiversity conservation (Herda-Rapp & Goedeke 2005; Chan *et al.* 2007; Leong 2010). Scientists who hope to influence

conservation policy must understand those constructions (Ludwig 2001).

Although all human experience is grounded in material reality, materiality alone is insufficient to motivate social action (Burke [1950]1969; Peterson 1997). People's past experiences, beliefs, and values frame their perceptions (Dingwall 2002; Lewicki *et al.* 2003). These frames influence what is important and shape people's interpretation of material reality. One practical way to identify and even shape future frames is to examine how they are instantiated through language. In this study, we focused on rhetorical framing, or language used to provoke identification and cooperation among humans. Rhetoric influences human motivation and action by shaping vocabularies. These vocabularies form terministic screens, wherein individual words (terms) interact to emphasize

some aspects of reality, while deemphasizing others. The terministic screens people use enable them to consider and discuss the importance, meaning, and demands (action called for) of their experience. Terministic screens, therefore, direct attention by emphasizing or deemphasizing different elements of reality. As we communicate, human perceptions become implications of the terministic screen through which they are articulated (Burke 1966). Terministic screens shape the way society reacts to environmental challenges by constraining possibilities. For example, in the United States, the *jobs versus environment* terministic screen pitted endangered species conservation against human welfare during the Reagan and first Bush administrations (Goodstein 1999; Peterson *et al.* 2004). Changing that terministic screen to *environmental protection as precondition for healthy economy* (fulfilled through approaches such as habitat conservation plans) during the Clinton administration encouraged simultaneous promotion of both endangered species conservation and job growth. These approaches allowed individuals, communities, and companies to harm endangered species if they promised sufficient mitigation to offset the damage. Although the conservation benefits of this terministic shift are debatable, a major shift occurred nonetheless.

Terministic screens become problematic in biodiversity conservation contexts when they frame the needs of humans and wildlife as arising from conscious antagonism. The terministic screen formed by the phrase *human–wildlife conflict* represents such a case because it emphasizes conscious antagonism between wildlife and humans (Conover 2002; Graham *et al.* 2005). Cases where resource demands of humans and wildlife must be balanced could be described as human–wildlife coexistence (Madden 2004), human–wildlife competition (Matthiopoulos *et al.* 2008), or human–human conflict (Marshall *et al.* 2007). The human–wildlife conflict terministic screen, however, is used to frame some of the most high-profile wildlife conservation cases in the world (e.g., whales, seals, sea turtles, tigers, wolves, bears, elephants; Sukumar 1991; Dublin & Hoare 2004; Omondi *et al.* 2004; Patterson *et al.* 2004). Concepts encompassed by the phrase, human–wildlife conflict, have inspired books and international collaborations, started centers, and generally shaped research addressing interactions between humans and wildlife. The Jack H. Berryman Institute for Wildlife Damage Management, for example, changed its web tagline from “Wildlife Damage Management” to “Resolving Human–Wildlife Conflicts” in 2007. This change coincided with the inaugural issue of its academic journal, *Human–Wildlife Conflicts*.

Conflict is a well developed, if interdisciplinary, concept. Definitions generally converge around “expressed disagreements among people who see incompatible goals

and potential interference in achieving these goals” (Pearce & Littlejohn 1997; Peterson *et al.* 2002:947; Pruitt & Kim 2004). Environmental conflicts implicate consciousness and social interaction, are intensely political, and are always linked to power relationships and values (Peterson & Franks 2005; Raik *et al.* 2008). Recent definitions of biodiversity conflict reflect these well-documented dimensions of conflict in part by suggesting that interests of two or more parties must clash and at least one of the parties must attempt to assert its interests at the expense of the other (Bennett *et al.* 2001; Marshall *et al.* 2007). This definition captures the essential idea that conflict emerges out of actors’ interpretation of a situation instead of simply competition for limited resources (Peterson *et al.* 2002; Yasmi *et al.* 2006). This version of conflict excludes most wildlife species as parties to conflict because few if any wild species could be construed as being simultaneously aware of their own goals, aware of human goals, and purposefully seeking to undermine human goal-seeking capacity.

In this article we use content analysis of journal articles, reports, books, and conference presentations drawn from conservation biology venues to analyze how the phrase, human–wildlife conflict frames perceptions of interactions between humans and wildlife. We then determine how the species involved and study area locations relate to those constructions. We conclude by suggesting ways conservation biologists can address challenges associated with human–wildlife coexistence without sacrificing the rhetorically powerful language of conflict.

Methods

We used a grounded theory approach to guide content analysis because we were attempting to generate theory from data (Corbin & Strauss 2008). We chose to investigate the use and meaning of human–wildlife conflict because of its mixed usage in articles we read and proposals we reviewed. We sensed an inconsistency in the usage of human–wildlife conflict that ranged from descriptions of people being afraid of wildlife (Kaltenborn *et al.* 2006) to attacks and counter-attacks between wildlife and people (Jackson & Wangchuk 2004; Bagchi & Mishra 2006). We assumed the most carefully designed and well-described studies addressing human–wildlife conflict would be found in published literature, and that studies most indicative of future trends would be found in papers from professional meetings related to wildlife conservation. Content analysis began with a review of 10 published journal articles to ensure that abstracts were sufficiently representative of the papers to allow the use

of abstracts as the source of material for analysis. Although some articles used multiple interpretations of human–wildlife conflict, none contradicted the primary interpretation identified in the abstract.

We then searched for journal articles, books, and reports (hereafter publications) that used combinations of the words “human”, “wildlife”, and “conflict” in their titles, key words, and/or abstracts using Web of Science, Wildlife and Ecology Studies Worldwide, and Google Scholar (November 2008). This search yielded 1,348 publications. We limited our analysis to 306 of these publications that used the phrase, human–wildlife conflict, or a species-specific alternative (e.g., human–bear conflict). We used 1983 as a cutoff point given the paucity of older human–wildlife conflict publications. We also searched available conference presentation abstracts from 2004 to 2008 for The Society for Conservation Biology (2005–2008), The Wildlife Society (2004–2008), and the Human Dimensions of Wildlife conference (2008). We analyzed the conference presentation abstracts for the same key words as the publications. A total of 117 conference presentation abstracts used the phrase, human–wildlife conflict, or a species-specific version of the phrase.

J. Birckhead and N. Peterson used thematic content analysis to develop categories for human–wildlife conflict (Peterson *et al.* 1994; Strauss & Corbin 1997). The content analysis entailed analyzing the titles and abstracts word-by-word to develop provisional concepts for how human–wildlife conflict was used. We reached saturation (no new categories emerged) after developing 15 categories. These categories then were collapsed into nine (seven types of animal damage, human–human conflict, and actual human–wildlife conflict; Table 1). During this process, we used the constant comparison technique to raise questions regarding categories, and used memos to document and analyze ideas about categories as they emerged during thematic analysis (Corbin & Strauss 2008). The development status of nations, whether or not the study was conducted in or directly adjacent to a protected area, and the types of species associated with studies emerged as categories explaining the use of the term, human–wildlife conflict. Species categories ultimately included two types of charismatic megafauna (herbivores and carnivores), meso-mammals (e.g., *Castor canadensis*, *Trichosurus vulpecula*), and birds.

As with most grounded theory research, our results and methods were intertwined (Strauss & Corbin 1997). Concepts of human–wildlife conflict usage that emerged during thematic analysis were used to generate definitions for each category that could be used to train coders and assess intercoder reliability (Krippendorff 2004). To assess reliability of the thematic analysis, an undergrad-

Table 1 Percentage of publications ($n = 306$; 1983–2008) and conference presentations ($n = 117$; 2004–2008) using each meaning of human–wildlife conflict

| Meaning of “human–wildlife conflict” | Publications | | Presentations | |
|--------------------------------------|--------------|------|---------------|------|
| | <i>n</i> | % | <i>n</i> | % |
| Animal damage–crops | 76 | 24.8 | 29 | 25.0 |
| Animal damage–livestock | 76 | 24.8 | 26 | 22.2 |
| Animal damage–human safety | 42 | 13.7 | 22 | 19.0 |
| Animal damage–property damage | 31 | 10.1 | 19 | 16.4 |
| Animal damage–fisheries | 17 | 5.6 | 2 | 1.7 |
| Human–human conflict | 11 | 3.6 | 1 | 0.9 |
| Animal damage–transportation | 10 | 3.3 | 5 | 4.3 |
| Animal damage–gardens | 5 | 1.6 | 0 | 0 |
| Human–wildlife conflict | 1 | 0.3 | 0 | 0 |
| Review | 37 | 12.1 | 12 | 10.3 |

uate worker recoded all the publications and presentations. Intercoder reliability was high for coding the types of human–wildlife conflict in publications ($\kappa = 0.941$, $P < 0.001$, $n = 306$) and conference presentation abstracts ($\kappa = 0.894$, $P < 0.001$, $n = 117$). We used the three categories obtained through thematic analysis (species type, development level of the nation where the study occurred, and whether the study occurred in a protected area) to formulate competing nominal logistic regression models (JMP 8.0.1, SAS Institute, Cary, NC, USA) that could account for four categories considered human–wildlife conflict in both publications and presentations (Table 2). We compared these models within an information-theoretic approach to model selection (Burnham & Anderson 2002). Development level of the nation where each study occurred was quantified using the Human Development Index value (0 to 1) for each nation as reported in the 2009 United Nations Development Programme Report (<http://hdr.undp.org/en/statistics/>). Some papers ($n = 37$) and presentations ($n = 22$) were conducted at a continental or global scale and were not assigned a Human Development Index value. We developed competing models to explain usage of human–wildlife conflict using each of the three variables singly, in pairs, collectively, and with interactions. We included three interactions: (1) species type and Human Development Index value, (2) species type and whether the study occurred in a protected area, and (3) Human Development Index value and whether the study occurred in a protected area. We used Akaike’s information criterion corrected for small sample size (AIC_c) to compare models and calculated the associated Akaike weights for each model [w_i ;

Table 2 Percent of publications ($n = 306$; 1983–2008) and conference presentations ($n = 117$; 2004–2008) that equate human–wildlife conflict with threats to human food, safety, property, and human–human conflicts by species type, development status of nation where research was conducted, and whether the study area was in or immediately adjacent to a protected area

| | Species type | | | | National development status ^a | | | Protected area | |
|-----------------------|----------------------------|----------------------------|-------------|------|--|-----------|-----------|----------------|-------|
| | Charismatic mega-herbivore | Charismatic mega-carnivore | Meso-mammal | Bird | Less developed | | | Yes | No |
| | | | | | Developing | Developed | Developed | | |
| Publications (n) | (47) | (104) | (26) | (34) | (27) | (113) | (123) | (81) | (146) |
| Food | 83.0 | 68.3 | 23.1 | 67.6 | 85.2 | 77.5 | 50.0 | 67.9 | 62.8 |
| Safety | 8.5 | 26.9 | 11.5 | 5.9 | 7.4 | 17.1 | 19.4 | 21.8 | 17.5 |
| Property | 6.4 | 2.9 | 61.5 | 17.6 | 3.7 | 0.9 | 26.9 | 2.6 | 18.2 |
| Human–human | 2.1 | 1.9 | 3.8 | 8.8 | 3.7 | 4.5 | 3.7 | 7.7 | 1.5 |
| Presentations (n) | (21) | (41) | (7) | (1) | (31) | (0) | (42) | (24) | (50) |
| Food | 58.3 | 43.9 | 0 | 0 | 77.4 | NA | 21.4 | 54.2 | 40.0 |
| Safety | 16.7 | 36.6 | 28.6 | 0 | 19.4 | NA | 38.1 | 29.2 | 30.0 |
| Property | 8.3 | 19.5 | 71.4 | 100 | 3.2 | NA | 38.1 | 16.7 | 28.0 |
| Human–human | 8.3 | 0 | 0 | 0 | 0 | NA | 2.4 | 0 | 2.0 |

^aNations were divided into three categories defined by the United Nations Statistics Division (<http://unstats.un.org/unsd/methods/m49/m49regin.htm>) for ease of comparison.

the probability that the current (i th) model is the best-approximating model among those considered].

Results

Human–wildlife conflict usage in publications (journal articles [$n = 277$, 90.5%], books [$n = 16$, 5.2%], reports [$n = 13$, 4.2%]) typically referred to animal damage (Table 1). Of all publications and conference presentations using the term, human–wildlife conflict, we coded one as actual human–wildlife conflict (Warne & Jones 2003). In that paper, magpies (*Cracticus tibicen*) repeatedly attacked specific humans that were seen as threats, and humans retaliated. The authors found “all intruding cyclists and mail deliverers were attacked, magpies did not attack all pedestrian intruders, suggesting possible discrimination within this category” (Warne & Jones 2003:265). In conference presentation abstracts, human–wildlife conflict was typically used to describe animal damage (Table 1).

When human–wildlife conflict usage referred to wildlife damaging consuming crops or livestock, we coded the document as *animal damage–crops* and *animal damage–livestock*, respectively (Table 1). These categories combined damages suffered by both subsistence and commercial producers, and included indirect effects where wildlife consumed a resource (e.g., water) used in crop or livestock production. “Human–elephant conflict, in particular the damage caused by elephants to small-holder crops, is a major challenge to the conservation of African elephant” (Graham & Ochieng 2008:76) repre-

sents expressions of human–wildlife conflict coded as *animal damage–crops*. “Therefore, wolf–human conflicts are common, chiefly because of wolf depredation on livestock” (Kumar & Rahmani 1997:466) represents *animal damage–livestock*.

When authors referred to wildlife consuming fish that humans wanted to use in aquaculture or in open water settings (e.g., commercial, subsistence, and recreational fishing) as human–wildlife conflict, we coded it *animal damage–fisheries* (Table 1). “Conflict between humans and cormorants occur because of depredation of fish from nets and weirs, consumption of trout and migrating salmon smelts” (Milton *et al.* 1995:91) represents articles coded as *animal damage–fisheries*. Wildlife damage to crops, livestock, and fisheries were grouped as a food-related category for quantitative analysis (Table 2).

When human–wildlife conflict usage alluded to wildlife frightening, injuring, killing, or transmitting infectious agents to humans, we coded the document *animal damage–human safety* (Tables 1 and 2). “When humans enter sloth bear habitat or sloth bears enter crop fields, conflicts occur that cause numerous human casualties” (Rajpurohit & Krausman 2000:393) typifies usage of human–wildlife conflict coded as *animal damage–human safety*.

When authors referred to wildlife damaging nonagricultural property as human–wildlife conflict we coded it as *animal damage–property damage* (Table 1). This category primarily included wildlife nesting on buildings and/or damaging physical structures. “A simpler way to limit bat–human conflicts may be to modify new and existing buildings to discourage colonies

from initially taking up residence” (Williams & Brittingham 1997:359) typifies usage of human–wildlife conflict coded *animal damage–property damage*. We coded usage of human–wildlife conflict alluding to wildlife damaging vehicles (e.g., airplanes) or interfering with their use as *animal damage–transportation* (Table 1). “These concurrent activities have resulted in increasing human–wildlife conflicts, most visibly deer–vehicle collisions” (Sullivan & Messmer 2003:163) typifies usage of human–wildlife conflict coded *animal damage–transportation*. When human–wildlife conflict usage alluded to wildlife raiding gardens that were not used by humans for subsistence purposes, we coded the document as *animal damage–gardens* (Table 1). “Several human–wildlife conflicts were identified ... bandicoots were disliked by a small minority (3%) of residents owing to the holes they dig in lawns and gardens” (FitzGibbon & Jones 2006:233) typifies usage of human–wildlife conflict coded *animal damage–gardens*. The property, transportation, and garden categories were grouped in a property category for quantitative analysis (Table 2).

When human–wildlife conflict referred to human disagreements over wildlife management decisions (e.g., preferred responses to conservation mandates), we coded the document as *human–human conflict* (Tables 1 and 2). “The growing popularity of caving and closing down caves for bat conservation has brought about human–wildlife conflicts” (Thorne 1990) typified human–wildlife conflict usage we coded *human–human conflict*. Finally, we created a *review* category for documents that discussed multiple interpretations of human–wildlife conflict (Table 1).

Based on our thematic analysis, it appeared that wildlife species type, the development status of the nation where the study occurred, and whether the study was conducted on private lands versus in/adjacent to protected areas were relevant to what authors described as a human–wildlife conflict. For publications, the probability that the model including all direct effects (species type, the Human Development Index value for the nation where the study occurred, and whether or not the study was conducted in/adjacent to a protected area) was the best approximating model among those considered was >99.9% ($w_i > 0.999$, Nagelkerke’s $R^2 = 0.560$). This model was sufficiently dominant that considering competing models was unnecessary (Burnham & Anderson 2002:75–79). For conference presentations, the best approximating model (1) included species type and Human Development Index values ($w_i = 0.864$, Nagelkerke’s $R^2 = 0.658$). The next best approximating models—including (2) Human Development Index values ($w_i = 0.098$, Nagelkerke’s $R^2 = 0.612$) and (3) all direct effects—received considerably less support ($w_i =$

0.030, Nagelkerke’s $R^2 = 0.686$). Specifically, the evidence ratios (w_1/w_i) for models 2 and 3 were 8.8 and 28.4, indicating model 1 was approximately 9 and 28 times more likely to be the best approximating model as compared to models 2 and 3, respectively.

Human–wildlife conflict usage reflecting wildlife damaging human food resources was most prevalent for charismatic mega-herbivores (83%), but charismatic mega-carnivores (68%) and birds (68%) also were cited frequently in publications (Table 2). Meso-mammals were the only group primarily implicated in property damage (62%). Charismatic mega-carnivores were implicated more than twice as often in publications involving threats to human safety than any other species group. Patterns were similar for presentations at professional meetings, with the exception of meso-mammals being portrayed as threats to human safety more frequently (Table 2).

Overall, focusing on damage to food resources was most prevalent in research conducted in less developed nations, whereas threats to human safety and property damage were more common themes in research conducted in developed nations. Wildlife damaging human food resources was most prevalent in publications where research areas were in less developed nations (85%), and progressively less prevalent when in developing (78%) and developed (50%) nations (Table 2). Human safety and property damage were focal topics more often in publications focused on developed nations than those focused on less developed nations. Equating human–wildlife conflict with nonfood property damage was relatively common in research conducted in developed nations (27%), but rare for research in developing (1%) or less developed nations (4%). A similar pattern occurred in conference presentations (Table 2).

Human–wildlife conflict usage in publications reporting research conducted in or immediately adjacent to protected areas tended to reflect human–human conflict more commonly (8%) than similar research on private lands (2%; Table 2). Conversely, a property damage usage of human–wildlife conflict was more prevalent for research from private lands (18%) than for research from protected areas (3%).

Discussion

Actual conflict between wildlife and humans was rarely described in publications or presentations ostensibly addressing human–wildlife conflict (Table 1). Most cases referred to as human–wildlife conflict would be more accurately described as perceptions among people that wildlife threaten something they care about (e.g., health, safety,

food, property; Conover 2002). Direct conflict of any type was rare in cases referred to as human–wildlife conflict, and when it did exist, it reflected human–human conflicts regarding how wildlife should be managed.

This study supports the assertion that human–human conflict is the primary type of conflict being labeled as human–wildlife conflict (Tables 1 and 2). Conflicts tended to occur among humans deciding how best to address potential wildlife threats to human property, health, safety, or development objectives. Wildlife in less developed countries has no more impetus to engage in conflict with humans over food than wildlife in developed nations. The driving factors relate to the human side of the equation (e.g., how people choose—or are pressured by other social institutions—to produce, store, and distribute food relative to wildlife populations). People living subsistence lifestyles are likely to experience greater impacts from, and thus be more concerned about, wildlife damaging their crops than are those who purchase food in plastic wrappers in supermarkets. Likewise, wildlife in more developed nations have no more reason to threaten human safety or nonfood property than do wildlife in less developed nations. Again, people’s concerns about such threats stem from the human side of the equation. Finally, the predominant species type addressed in human–wildlife conflict studies reflects the trend of conflating human issues with human–wildlife conflict. The human–wildlife conflict studies targeting threats to human food production focused on charismatic megafauna, rather than the species doing most crop damage. Wildlife species of little interest to many conservation biologists (e.g., rodents, starlings) cause most of the \$8.3 billion in wildlife damage expenses in urban areas and \$4.5 billion in agricultural losses in the United States (Conover 2002; Pimentel 2002).

Researchers constructed the human–wildlife conflict terministic screen as an alternative to animal damage management and other ways of describing problematic interactions between humans and wildlife. Although the human–wildlife conflict terministic screen may have more cachet than animal damage management—and thus may appear likely to increase the stature of the subdiscipline, improve funding opportunities, and create a sense of urgency—this representation also constrains the way problems are defined and limits the array of potential solutions available. Solutions to animal damage problems, for example, differ from methods used to resolve human–human conflicts.

Animal damage can refer to anything wildlife do that any human dislikes (Conover 2002). When animal damage is portrayed as human–wildlife conflict, it may perpetuate the anthropomorphic view that animals possess humanlike consciousness, including values, interests, and

intentions—that they want what is ours, thus representing wild animals as human antagonists. For example, Dublin & Hoare (2004:271) state “human–elephant conflict . . . involves not only agricultural losses, but also a complex social dimension in the most affected sector, subsistence farming.” This terministic screen pits elephants against subsistence farmers, but the “complex social dimension” refers to human, not elephant, society. Neither party to this so-called human–wildlife conflict created the social context making elephants a threat to human food supplies (e.g., locally increased elephant numbers, encroachment between agricultural and conservation lands), and neither party holds the power to change those contexts.

Predictable but unintended consequences can accompany framing biodiversity conservation challenges as human–wildlife conflict. A human–wildlife conflict terministic screen places wildlife, entities that cannot represent themselves in the political sphere, in the role of combatants against people. If they accept the role of combatants, it makes sense for people to direct anger, frustration, and even attacks at wildlife rather than their human adversaries with potentially grave conservation consequences (Peterson *et al.* 2002; Brook *et al.* 2003). Conflicts labeled as human–wildlife conflict associated with the U.S. Endangered Species Act exemplify mislabeled human–human conflicts. Without the Act, there would be little animosity toward a host of rather benign wild species, such as the spotted owl (*Strix occidentalis*) or the Key deer (*Odocoileus virginianus clavium*), whose existence constrains human development projects only by virtue of their listing under the Act (Freudenburg *et al.* 1998; Peterson *et al.* 2002). Individuals from these species were hung in effigy by angry citizens in part because the human–wildlife conflict terministic screen conflated them with conscious human antagonists. These species cannot survive without protection, but humans, not the species themselves, are demanding the protection. Further, labeling human–human conflicts as human–wildlife conflicts may limit opportunities for conflict resolution by diverting attention from addressing conflicts within human political systems until they escalate to self-reinforcing levels that are much more difficult to resolve (Peterson *et al.* 2002).

Although most conservation researchers recognize that humans are part of, rather than apart from, nature, the human–wildlife conflict terministic screen threatens to attenuate that awareness. Labeling conflict between humans regarding biodiversity conservation and animal damage as human–wildlife conflict dichotomizes humans and nature, framing wildlife as something that threatens human existence, rather than contributing to human welfare. Yet shifting toward a terministic screen that directs attention toward the potential for coexistence

between all species, while still recognizing the existence of multiple, sometimes contradictory needs, is difficult.

Given that the central concern identified in this study is the terministic screen used for environmental conflict, we suggest that rhetoric may also supply a corrective. Burke ([1937]1984; Peterson 1997) argues that human societies use both tragic and comic approaches to correct dysfunctional terministic screens. The more common, tragic, approach rejects and seeks to destroy the entire social reality engendered by the offending terministic screen. The comic corrective, however, recognizes terministic screens as products of fallible humans that simultaneously exceed and distort the intents of their creators. Because a comic corrective recognizes every perspective is an experiment, it should facilitate adaptive change. Recognizing that the internal contradictions associated with the label, human–wildlife conflict, have the unintended consequence of implicating wildlife in consciously antagonistic relations with humans opens the door to alternative ways of framing conflicts over biodiversity conservation. We suggest conservation researchers and practitioners utilize the comic corrective to pun the internal contradictions associated with human–wildlife conflict and experiment with developing a terministic screen from the label, human–wildlife coexistence.

Two recent examples highlight how conservation practitioners have used the comic corrective to begin shifting the human–wildlife conflict terministic screen. Francine Madden, executive director of the Human–Wildlife Conflict Collaboration, has helped develop a training program (www.humanwildlifeconflict.org/Training.htm) that focuses on improving participants' ability to identify and address human–human conflicts that have been masked by the human–wildlife conflict label. This approach promotes a shift toward human–wildlife coexistence by highlighting the ambiguity inherent to relations among humans, and how those relationships influence interaction between humans and wildlife. Similarly, Mike Conover and Bruce Leopold, at the Jack H. Berryman Institute (A National Institute for Resolving Human–Wildlife Conflicts), provided constructive feedback during earlier drafts of this article, and played a role in the 2010 name change of the journal *Human–Wildlife Conflicts* to *Human–Wildlife Interactions*. The name change illustrates how a label can redirect attention to mutuality between humans and wildlife, while still addressing cases where humans and wildlife compete for limited resources.

Although nature is not inherently a rhetorical text, human actions and political institutions associated with it do function rhetorically. We argue that conservation scientists must attend to both verbal and material systems. Applying a comic corrective to the ways environmental conflict is rhetorically framed encourages us to reconsider our

engagement in the political process; to remind anyone who will listen that we threaten our own species when we threaten the existence of others.

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